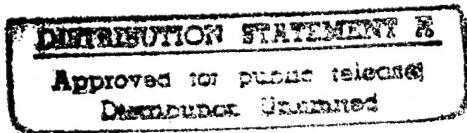


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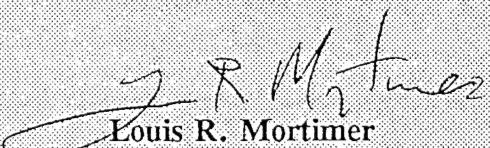
*Peter R. Blood
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PREFACE

This bibliography provides selective annotations of open-source material on two current issues:

--nuclear developments in South Asia, and

--tactics and organization of the Afghan resistance

The bibliography incorporates serials and monographs received in the previous month and is part of a continuing series on the above subjects.

Entries within each topic are arranged alphabetically by author or title. Call numbers for materials available in the Library of Congress are included to facilitate recovery of works cited.

CONTENTS

	<u>Page</u>
1. NUCLEAR DEVELOPMENTS IN SOUTH ASIA	1
GLOSSARY OF TERMS.....	2
CITATIONS AND ABSTRACTS.....	4
2. TACTICS AND ORGANIZATION OF THE AFGHAN RESISTANCE	10
GLOSSARY OF TERMS.....	11
CITATIONS AND ABSTRACTS.....	12

1. NUCLEAR DEVELOPMENTS IN SOUTH ASIA

GLOSSARY OF TERMS

AEMC	The Atomic Energy Minerals Center at Lahore is responsible for finding and recovering uranium ore, thereby filling a vital need stemming from boycotts of Pakistan by international nuclear fuel suppliers.
BARC	Bhabha Atomic Research Centre is located in north Bombay and is India's facility for research in and development of nuclear technology.
CHASHNUPP	Pakistan's Chashma Nuclear Power Plant, a projected 900-megawatt facility in Mianwali District, Punjab, was sanctioned in 1982 in order to create electrical power through light-water technology.
Cirus	A Candu-type Canadian-built plant located at BARC, Cirus was commissioned in 1960. India reprocessed spent fuel from Cirus to make the plutonium for its 1974 "peaceful nuclear explosion;" Cirus has a capacity of 40 megawatts.
Dhruva	One of the world's few high-flux reactors, Dhruva, which went critical in August 1985, is solely the product of Indian research and production, and therefore, falls completely outside IAEA safeguards. Dhruva shares facilities with Cirus, its neighbor in the BARC, has a 100-megawatt capacity, and can produce 30 kg of plutonium annually.
IAEA	International Atomic Energy Agency (United Nations)
Kalpakkam	This Tamil Nadu town is the site of the Indira Gandhi Atomic Research Center (formerly MAPP) and gives its name to a 40-megawatt fast-breeder reactor which went critical in August 1985 using plutonium-uranium carbide fuel.

KANUPP	Karachi Nuclear Power Plant, a 125-megawatt reactor, was supplied by Canada on a turnkey basis and became operational in 1972.
MAPP-1	Madras Atomic Power Project's first Candu-type 235-megawatt unit was commissioned in January 1984. The center is located at Kalpakkam, Tamil Nadu, and was produced completely by Indian research and technology; consequently, its units and the plutonium they produce fall outside IAEA inspection safeguards. MAPP units are intended to provide electricity for Madras. In October 1985, MAPP was renamed the Indira Gandhi Atomic Research Center, but new names for individual plants have not been made public.
MAPP-2	The second unit at Madras Atomic Power Project is also a Candu-type 235-megawatt plutonium and heavy-water reactor. MAPP-2 went critical in August 1985 and was commissioned in October of the same year.
NPT	The Nuclear Nonproliferation Treaty was ratified by the UN General Assembly in 1968. India and Pakistan contend that the NPT discriminates against nonnuclear states, but Pakistan has repeatedly offered to sign if India will do so simultaneously. In the UNGA, Islamabad voted in favor of the NPT.
PAEC	Pakistan Atomic Energy Commission
PINSTECH	Pakistan Institute of Nuclear Science Technology, the site of a US-supplied 5-megawatt "swimming pool"-type reactor installed in the 1960s
Tarapur	The Tarapur nuclear power plant, located near Bombay, was built by the United States. It has a capacity of 600 megawatts and can annually produce 50 to 80 kg of plutonium. Tarapur and its products come under IAEA inspection safeguards.

CITATIONS AND ABSTRACTS

A SELECTIVE, ANNOTATED BIBLIOGRAPHY
ON CURRENT SOUTH ASIAN ISSUES
November 1986

Abraham, George. "Nuclear Power Chairman Briefs Scientists On Plan." Times of India (Bombay), 8 August 1986, p. 9. In JPRS-TND-86-021, 2 October 1986, p. 23.

The Planning Commission has allocated 14.1 billion rupees to the Department of Atomic Energy to set up four 235 MW power stations for commission in 1990. Two are slated for Narora in Uttar Pradesh, and two for Kakrapar in Gujarat. By 1994, the commission plans to establish two more stations in Kaiga (Karnataka) and two in Rawatbhata (Rajasthan), all of 235 MW capacity. In its nuclear profile for the year 2000, the commission envisages an additional four 235 MW stations and possibly ten units with 500 MW capacity. In order to develop extra-budgetary resources to meet these goals, the Nuclear Power Board will be converted into an autonomous corporation over the next six months.

Ali, Moshin. "No To Free Zone For Nuclear Weapons." Pakistan & Gulf Economist (Karachi), 12-18 July 1986, pp. 38-39.

The author recounts Pakistan's efforts in the U.N. to establish South Asia as a zone free of nuclear weapons. These efforts include an offer to place all of its own and India's nuclear installations under the full-scale safeguards of the IAEA, and to renounce the possession and manufacture of nuclear weapons. The author claims that Bhutan and Mauritius, the two nations which sided with India in opposition to Pakistan's proposal, are simply acting as pawns in India's bid for nuclear expansion.

Ameen, A. Fareed. "The Mythical Bomb." Muslim (Islamabad), 5 August 1986, p. 4.

The author describes Pakistan's progress in achieving each of three components of nuclear capability:

1) militarily usable warheads:

Of Pakistan's two gas centrifuge enrichment plants, the smaller one in Sihala has only experimental capacity, while the larger one in Kahuta is rumoured to have 1,000 centrifuges and the capacity, if fully operational, to

A SELECTIVE, ANNOTATED BIBLIOGRAPHY
ON CURRENT SOUTH ASIAN ISSUES
November 1986

produce 15 kilograms of highly enriched uranium annually. In February, 1984, Dr. Abdul Qadir Khan announced that Pakistan had succeeded in enriching uranium, and therefore had the capacity in principle to build a bomb. The New Labs reprocessing plant in Rawalpindi (built according to blueprints secured in negotiations with France) has an extraction capacity of 10-20 kilograms of plutonium a year. It is doubtful whether New Labs is or has ever been operational.

2) delivery systems: While the F-16 is the most effective available system, the author claims that it is not indispensable to Pakistan's delivery capability. He cites the 160 other combat aircraft (Mirage III's and Chinese A-5's) that are also available for this purpose.

3) command and control: The author remarks that the leadership has little command and control over the nuclear program. The author concludes that, although Pakistan now has the capacity to build a nuclear device, it has been strait jacketed by the restrictions of the US aid program.

"Asea Can Export Nuclear Technology." Svenska Dagbladet (Stockholm), 8 August 1986, p. 29. In JPRS-TND-86-020, 26 September 1986, p. 58.

The Swedish Government has given Asea Metallurgy AB permission to export a hot isotope press to India despite the fact that India has refused to sign the non-proliferation agreement. The government has previously cited the issue of non-proliferation to block the sale of X-ray flash units to India. Both technologies can be used in the production of nuclear weapons.

"BARC Successfully Transfers Technology." India News (Washington), Vol. XXV, No. 30, 20 October 1986, p. 7.

The Bhabha Atomic Research Centre (BARC) has successfully transferred "Gamma Switch" technology to a company in Pune

A SELECTIVE, ANNOTATED BIBLIOGRAPHY
ON CURRENT SOUTH ASIAN ISSUES
November 1986

on a non-exclusive basis. The Gamma Switch combines a radioactive source emitting an intense but narrow beam of Gamma radiation together with a Gamma radiation sensor.

"BARC To Decommission 30-Year-Old Research Reactor." Times of India (Bombay), 9 August 1986, p. 5. In JPRS-TND-86-021, 2 October 1986, p. 30.

Scientists at the Bhabha Atomic Research Centre (BARC) will shortly decommission and dismantle Aspara, the one MW research reactor that was the nation's first reactor and, when it was built in 1955, the first non-Soviet reactor in Asia. Operating on highly-enriched uranium and light water, Aspara has been used largely for basic research in physics and chemistry.

Bidwai, Praful. "Reports on Accident at Talcher Heavy Water Plant Studied." Times of India (Bombay), 18 August 1986, pp. 1, 16. In JPRS-TND-86-021, 2 October 1986, p. 25.

Investigations into the April 29 accident at the Talcher Heavy Water Plant in Orissa have brought to light a multitude of technical and administrative lapses. The explosion and subsequent fire occurred when one of the compressor gaskets developed a leak. Experts have suggested that this leak might have resulted from the absence of one of the gasket's two aluminum liners. Alternatively, the gasket might have been installed improperly for lack of an appropriate torque wrench. In either case, the Department of Atomic Energy had failed to obtain the necessary specifications from the West German manufacturer, and had transferred away from the Talcher plant four senior engineers who were familiar with its problems. As a result of this most recent accident, the Talcher plant will require repairs costing between 4 and 10 million rupees before it is operational. Even then, it is questionable whether it will ever reach its design capacity of 62.7 tons of heavy water a year.

A SELECTIVE, ANNOTATED BIBLIOGRAPHY
ON CURRENT SOUTH ASIAN ISSUES
November 1986

"Damages to Rajasthan N-Power Unit One Told." Hindu (Madras),
13 August 1986, p. 1. In JPRS-TND-086-021, 2 October 1986,
p. 24.

Unit 1 of the Rajasthan Atomic Power Station is unlikely to resume commercial power generation because of a crack in one of the nickel-carbon steel end shields. After four years of partially successful repair efforts, nuclear engineers at the plant have concluded that conventional sealing methods are insufficient to permit resumption of maximum capacity output of 230 MW. Replacement of the damaged shield would require fully robotized work in a highly radioactive environment, with a technology that the nuclear industry has yet to develop. Even with the slated 600 million rupee repairs, the unit will probably be suitable only for experimental use.

"India Rejects Nuclear Offer From USSR." Daily News (Colombo),
21 August 1986, p. 1.

India's Department of Atomic Energy turned down the Soviet offer of two 440-megawatt reactors, claiming that the Soviet light-water reactors, fuelled by enriched uranium, would not fit in with India's nuclear program of heavy-water reactors and natural uranium. India currently operates six heavy-water power plants which supply 680 megawatts of electricity (with a capacity of 1,230 megawatts). The government plans to build 22 nuclear plants by the year 2000, with total output of 10,000 megawatts.

"US Turns Blind Eye To Pak N-Weapons Plan." Deccan Chronicle
(Secunderabad), 17 September 1986, n.p.

Experts at the Institute of Defence Studies and Analysis in New Delhi estimate that the Kahuta Plant in Pakistan is now able to enrich uranium to a level of 30%. They claim that the Reagan administration is attempting to alter the US-Pakistan aid agreement to permit continued aid despite

A SELECTIVE, ANNOTATED BIBLIOGRAPHY
ON CURRENT SOUTH ASIAN ISSUES
November 1986

the achievement of enrichment above the stipulated 5%
level.

2. TACTICS AND ORGANIZATION OF THE AFGHAN RESISTANCE

GLOSSARY OF TERMS

Commander	A resistance fighter who is recognized as a military leader in local or regional areas of conflict; some commanders are respected outside their own regions, but there is not yet a coordinated, nationwide, insurgent command in Afghanistan. The title commander is the only honorific or rank recognized by the resistance movement.
Dushmani	(singular: <u>dushman</u>) Soviet pejorative term for Afghan insurgents; it means "bandit" and originated during the 1930s Central Asia resistance.
DRA	The Democratic Republic of Afghanistan was established as the result of a coup led by Mohammad Nur Taraki and Hafizullah Amin in April 1978. Deteriorating internal security led to military intervention by the Soviet Union in December 1979 and Amin was killed by the invading troops. The Soviet invasion transformed armed resistance toward the modernistic but arbitrary reforms of Taraki and Amin into a war of national liberation.
KHAD	DRA intelligence service whose operations are entirely directed by its many Soviet KGB advisors. The acronym stands for Khedmat-Etala'at-e-Daulati (State Information Service). KHAD received ministerial rank in January 1986.
Mujahideen	(singular: <u>mujahid</u>) This Islamic term means "holy warrior," but it is most often used as a name for Afghanistan's resistance fighters, who consider their campaign a <u>jihad</u> (holy war) to drive unbelievers from their country.
Spetznaz	Soviet special warfare troops under the GRU (Military Intelligence Directorate) of the Soviet Ministry of Defense. These highly mobile units are deployed throughout Afghanistan for operations which require more skill or loyalty than is commonly displayed by Soviet or DRA troops.

CITATIONS AND ABSTRACTS

A SELECTIVE, ANNOTATED BIBLIOGRAPHY
ON CURRENT SOUTH ASIAN ISSUES
November 1986

"Country's Status Under Najib's Rule Examined." Economist
(London), 6-12 September 1986, pp. 31-32. HG11.E2

This article gauges the expendability in Soviet calculations, of Afghanistan's leader, Najibullah. Dr. Najib is clearly trying to make himself indispensable to the DRA "pacification" program. Under his rule many peasants have been given land, new mosques have been built and old ones repaired, and many tribal leaders previously hostile to the regime have been neutralized through bribes and other enticements. Furthermore, Najib is confident that the mujahideen would be demoralized if his government won western recognition in return for a Soviet troop withdrawal. Yet he is worried that Soviet leader Gorbachev could include his removal in an agreement.

"President Khameneh'i on Iran's Commitment of Afghan Muslims' Struggle." IDSA News Review--West Asia, Vol. 17, no. 7, July 1986, p. 486.

On 30 July Iran's President Ali Khameneh'i endorsed the mujahed struggle against the Soviet Union. He said that Afghanistan's struggle against foreign occupation is a true Islamic jihad. Khameneh'i also used the occasion to attack US support for the struggle and said that no country should compromise with one enemy in order to defeat another.

"Rebels May Be Invited to Join Government." Patriot (New Delhi), 10 October 1986, p. 1.

In an interview with Poland's official daily Trybuna Luda, Afghan leader Najibullah offered to give his opponents the choice of putting down their arms and joining him "to participate in the building of a new Afghanistan." Those who accept the DRA's "anti-reactionary" goals, he said, may be invited to join the government.

Rupert, James. "Rebels Say Iran Seeks Control Of Insurgency." Washington Post, 8 October 1986, pp. A1, A20.

A SELECTIVE, ANNOTATED BIBLIOGRAPHY
ON CURRENT SOUTH ASIAN ISSUES
November 1986

Iran's precise role in the Afghan struggle is unclear. Its support for the anti-communist mujahideen has often been contingent on the imposition of a type of Islamic fundamentalism inimical to most Afghans. Pro-Iranian factions in the central Hazarajat region of Afghanistan have, over the years, battled and finally defeated the alliance of traditional mujahed groups once dominant in the region. The course of this strife represents the worst infighting within the Afghan resistance during the war. Furthermore, many Afghans feel that Iran may yet seek an accommodation with the Soviet Union which would mean a cutoff of aid and sanctuary.

Rupert, James. "Soviets Hold a Pakistan Card." Washington Post, 7 October 1986, pp. A1, A13.

Afghan refugees have been in Pakistan for more than 8 years and their welcome may be wearing thin. Pakistan's border provinces, especially the North West Frontier Province and Baluchistan, have been targets for Soviet political manipulation. DRA cross-border provocations and sponsorship of terrorist bombings on Pakistani soil have heightened Pakistan's insecurity. Left-wing politicians with Soviet encouragement have exploited public resentment against continued support for the 2-3 million Afghan refugees resident in these underdeveloped and impoverished provinces. The author is especially concerned with Baluchistan, which is described as a "Soviet card waiting to be played." Separatist Baluch radicals, spearheaded by the large and well-organized Baluch Student's Organization, willingly seek Soviet aid. This gives the Soviets an option to increase pressure on Pakistan. The author asserts, however, that the Kremlin is not directly trying to destabilize or overthrow the Pakistani Government. Instead it is "waiting out" the Reagan and Zia governments. The Soviets may be hoping for more conciliatory successors with which to negotiate an acceptable exit from its military quagmire. Until then they intend to maintain the pressure.

A SELECTIVE, ANNOTATED BIBLIOGRAPHY
ON CURRENT SOUTH ASIAN ISSUES
November 1986

Rupert, James. "Tales of a Ruined City: Fighting Over Rubble."
Washington Post, 6 October 1986, pp. A1, A20.

The fighting in Kandahar has been consistently heavy for years. Several times during the war the mujahideen have taken control of the city's center but intensive air and artillery bombardments have each time forced them to yield their advantage. The author reports on the current situation. During the day, a number of Soviet/DRA outposts keep the resistance fighters at bay but when night falls the guerrillas slip through. Soviet artillery is concentrated at their base at Kandahar's airport and has reduced surrounding villages to eery ghost towns. Yet the region's fragile economy manages to survive. In fact, both the communists and the mujahideen want the mainstay fruit-growing business to continue in order to earn scarce money to feed the remaining population in Kandahar. The fruit trade is conducted by men too old to serve in the ranks of either the mujahideen or the government.

Rupert, James. "The Soviet's Underground War---Afghan Conflict Includes Fight for Resources." Washington Post, 20 October 1986, pp. A1, A16.

Afghanistan has huge, largely untapped deposits of copper, iron, petroleum, and natural gas. It also has a yet undetermined quantity of uranium. These natural resources are of great concern to the Kremlin. The Soviets have a long term goal of integrating the Afghan economy with their own. Success in this endeavor would release Afghan natural resources for the economic development of adjacent areas in Soviet Central Asia. Warfare has prevented the Soviets from full-scale exploitation of Afghanistan's resources--with the exception of gas. In the 1960s the Soviets built underground pipelines from northern Afghanistan to the Soviet Union. The Soviets installed meters only on their side of the border, thus preventing the Afghans from monitoring how much gas they pumped.

A SELECTIVE, ANNOTATED BIBLIOGRAPHY
ON CURRENT SOUTH ASIAN ISSUES
November 1986

"Tehran Reports 2 Soviet 'Officers' Killed In Kabul." Tehran
Domestic Service in Persian, 17 September 1986. In
JPRS-TOT-86-074-L, 6 October 1986, p. 23.

Tehran reports that the mujahideen ambushed and killed two
high-ranking Soviet officers as they were enroute to Kabul
airport. Iran's Central News Unit also reports that the
Golestan region in Farah Province was liberated from
government forces.